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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/718,938

11/21/2003

Steven R. Sedlmayr

AUO1013

3584

7590

06/27/2006

Law Office of Roxana H. Yang

P.O. Box 400

Los Altos, CA 94023

EXAMINER

PRITCHETT, JOSHUA L

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,938

Applicant(s)

SEDLMAYR, STEVEN R.

Examiner

Joshua L. Pritchett

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 129-131 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 129-131 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 129-131 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karasawa (US 5,200,843) in view of Konno (US 4,497,015).

Karasawa et al. disclose a system (fig. 13) or method for displaying a color image projected from a liquid crystal device (fig. 13) which includes means for a first liquid crystal light valve (8G), a second liquid crystal light valve (8B) and a third liquid crystal light valve (8R), comprising (a) means (1) for producing a collimated primary beam of light having a predetermined range of wavelengths, randomly changing orientations of a chosen component of electric field vectors; (b) means (45) for separating the primary beam of light into two or more primary color beams of light, each of the primary color beams having the same selected predetermined orientation of a chosen component of electric field vectors (from 44, column 1, lines 17-21) as that of the other primary color beams; (c) means (46) for forming the optical light paths between the light source (1) and the three liquid crystal light valves (8G, 8B, 8R) which are

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unequal in length and based on luminous intensity of the primary colors associated with respective light valve produced by the light source (fig. 13); (d) adjusting at least one of the primary color beams of light by removing at least a predetermined portion of electromagnetic energy from the at least one beam at a beam stop (fig. 13); the liquid crystal light valves of Karasawa (8B and 8R) will block a portion of the light incident the valve outside the aperture of the valve, thus the valve functions as a beam stop for errant light; (e) means (8G, 8B, 8R) for altering the selected predetermined orientation of the chosen component of the electric field vectors of a plurality of portions of each of the separate primary color beams of light by passing each of the separate primary color beams of light through a respective one of the liquid crystal light valves in a single direction (fig. 13) whereby the selected predetermined orientation of the chosen component of the electric field vectors of the plurality of portions of each of the separate primary color beams of light is altered in response to a stimulus means by applying a signal means to the stimulus means in a predetermined manner as each of the separate primary color beams of light passes through the respective one of the liquid crystal light valves altering the selected predetermined orientation of the chosen component of the electric field vectors (column 1, lines 31-33); (f) means (47) for combining the altered separate primary color beams of light into a single collinear beam of light without substantially changing the altered selected predetermined orientation of the chosen component of the electric field vectors of the plurality of portions of each of the separate beams of light; (g) means (48) for resolving; and ¹⁴(Eh) means (49) for passing at least one of the resolved beams (S) to a projection means (13), the projection means receiving only light having substantially the same selected predetermined orientation of the chosen component of the electric field vectors (S). Karasawa et al. disclose the claimed

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invention except for the collimated primary beam having a substantially uniform flux intensity substantially across the initial beam of light and a rectangular cross sectional area; having (b) means converting the primary beam of light to substantially the same selected predetermined orientation of a chosen component of the electric field vectors without discarding half of the light; and having (g) means for resolving from the single collinear beam a first resolved beam having substantially a first selected predetermined orientation of a chosen component of electromagnetic wave field vectors and a second resolved beam having substantially a second selected predetermined orientation of a chosen component of electromagnetic wave field vectors, whereby the first and second selected predetermined orientation of the chosen component of the electromagnetic wave field vectors are different from one another. However Karasawa et al. also teaches that when using a polarizing beam splitter like element 2 (which resolves from the single collinear beam of electromagnetic energy/light a first resolved beam of electromagnetic energy/light having substantially a first selected predetermined orientation of a chosen component of electromagnetic wave ~~field~~^{field 48} vectors and a second resolved beam of electromagnetic energy/light having substantially a second selected predetermined orientation of a chosen component of electromagnetic wave field vectors, whereby the first and second selected predetermined orientation of the chosen component of the electromagnetic wave field vectors are different from one another, see figs. 2 and 3), an absorption type polarizer like 14 is not required (see column 5, lines 49-52) and that absorption type polarizers generate higher temperatures which can cause stability problems in the system (see column 1, lines 54-61). Therefore, it would have been obvious to one of ordinary skill in the ~~art~~^{art 48} at the time the invention was made to replace the analyzing absorption type polarizer (48) with a polarizing beam splitter to further reduce the

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heat in the system. Karasawa et al. also teaches in figs. 1 and 5, an alternative means (3) for converting the randomly changing orientations of said primary beam of light to having substantially the same selected predetermined orientation of a chosen component of the electric field vectors without discarding half the light (see fig. 5) and further not requiring an absorption type polarizer like 44 as detailed above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the analyzing absorption type polarizer (44) with polarization converting means (3) to further reduce the heat in the system, which would also prevent discarding half the light. Finally, Konno et al. disclose a light illumination device ⁴⁰(fig. 5) which produces a primary beam (at M) which is collimated and has a substantially uniform flux intensity substantially across the initial beam of light (column 5, lines 43-52) and has a rectangular cross sectional area (using lens element 102, fig. 3., column 3, lines 5-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the light source of Karasawa et al. with that of Konno et al. to have a more uniform intensity light beam and provide a more consistent image. The method of utilizing the structure of the claim is inherent therein.

Response to Arguments

Applicant's arguments filed April 12, 2006 have been fully considered but they are not persuasive.

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Applicant argues that the prior art fails to teach or suggest the newly added limitations regarding a beam stop. As stated in the rejection above the liquid crystal light valves act as beam stops capable of blocking errant light from passing through the aperture of the valve.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua L Pritchett
Examiner
Art Unit 2872

JLP *JP*


DREW A. DUNN
SUPERVISORY PATENT EXAMINER